



K18U 1937

Reg. No. :

Name :

III Semester B.C.A. Degree (CBCSS – Reg./Sup./Imp.) Examination,
November 2018
(2014 Admn. Onwards)
General Course
3A13BCA : DATABASE MANAGEMENT SYSTEM

Time : 3 Hours

Max. Marks : 40

SECTION – A

1. **One** word answer :

- a) _____ is a collection of interrelated data and a set of programs to access those data.
- | | |
|------------------------|-------------------------------|
| a) Database | b) Database Management System |
| c) Application program | d) Schema |
- b) The database schema is expressed using _____
- | | |
|--------|--------|
| a) DDL | b) HLL |
| c) DML | d) DCL |
- c) An entity set that does not have sufficient attributes to form a primary key is a
- | | |
|----------------------|-----------------------|
| a) Strong entity set | b) Weak entity set |
| c) Simple entity set | d) Primary entity set |
- d) A functional dependency is a relationship between or among :
- | | |
|--------------|---------------|
| a) Tables | b) Rows |
| c) Relations | d) Attributes |
- e) To sort the results of a query we always use _____ clause.
- f) An attribute in one table that references a unique record in another table is called a _____
- g) An aborted transaction must have no effect on the state of the database. This is to ensure _____ property.
- h) The relational algebra operation which allows us to find tuples that are in one relation but not in another is called _____

(8x¹/₂=4)

P.T.O.



SECTION – B

Write short notes on **any seven** of the following questions.

2. Define data independence.
3. Define the join operation in relational algebra.
4. Explain the use of ORDER BY clause of SQL.
5. What are the conditions to be fulfilled for two relations to be involved in a UNION operation ?
6. List the various cases where use of NULL value would be appropriate.
7. Write the syntax of SELECT command in SQL.
8. Write the syntax to create a view in SQL.
9. Define set intersection operation in relational algebra.
10. What is a trigger ?
11. When is the concept of weak entity used in data modelling ? (7×2=14)

SECTION – C

Answer **any four** of the following questions.

12. What are the various advantages of using a DBMS ?
13. Briefly explain various DDL commands with syntax.
14. What is a view in SQL ? Describe the procedure for renaming a column of a view.
15. Explain about various unary relational algebraic operations.
16. What is normalization ? What is its role in database design ?
17. Explain the concept of lossless join decomposition with an example. (4×3=12)



SECTION – D

Write an essay on **any two** of the following questions.

18. Explain about various data models used to describe the design of a database.
 19. Construct an ER diagram for a car insurance company with a set of customers, each of whom owns a number of cars. Each car has a number of recorded accidents associated with it. Identify the appropriate entities, attribute and relationships.
 20. Write short notes on :
 - a) Triggers and stored procedures.
 - b) Authorisation mechanisms available in SQL.
 21. a) Discuss about ACID properties of a transaction.
b) Define an integrity constraint. What is the role of a foreign key in maintaining the integrity ? **(2×5=10)**
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